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BEFORE THE COMMITTEE ON AGRICULTURE  
U.S. HOUSE OF REPRESENTATIVES  
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Mr. Chairman and Members of the Committee, thank you for the opportunity to participate in this hearing on a national animal identification system. I am accompanied by Dr. Jim Butler, USDA Deputy Under Secretary for Farm and Foreign Agricultural Services; Nancy Bryson, USDA General Counsel; and Dr. Keith Collins, USDA Chief Economist. Our group was asked by Secretary Veneman to provide recommendations on how to proceed with implementing a national animal identification program. Today, I would like to discuss the purpose and benefits of a national animal identification system, provide an overview of the current status of animal identification systems and present USDA's plan for implementation of a national identification system.

**Background on animal identification systems**

The advent of increased animal disease outbreaks around the globe over the past decade, especially the recent BSE-positive cow found in Washington State, have intensified the public interest in developing a national animal identification program for the purpose of protecting animal health.

Livestock identification was first used to indicate ownership and deter theft. Then, in the early 1960s, USDA's Animal and Plant Health Inspection Services (APHIS) began using tags, tattoos, and brands to meet statutory regulations to trace the movements of animals during disease outbreaks and for eradication programs. Today, the purpose of animal identification systems remains primarily to address veterinary and animal health issues. Most individuals associated with livestock recognize that early identification of animal disease can contain and

reduce the costs associated with a disease outbreak. Other benefits of a national animal identification system in addition to animal health include facilitating value-added production and marketing programs. However, it is important to point out that no animal identification program by itself will prevent an introduction of animal disease, ensure safe food or prevent a recall.

**U.S. programs.** While there is currently no nationwide animal identification system in the United States for all animals of a given species, some segments of certain species are required to be identified as part of current program disease eradication activities. In addition, some significant regional voluntary identification programs are in place, and others are currently being developed and tested. Over the past several years, USDA has supported several state or state sponsored animal identification programs. For example, either through cooperative agreements or research grants, APHIS and the Cooperative State Research, Education, and Extension Service (CSREES) have funded projects in Alabama, Iowa, Kansas, Michigan, Montana, New Mexico, Texas, Utah, and Wisconsin. In addition, a number of states have contacted USDA and expressed interest in developing and testing animal identification systems.

The investments made by USDA in identification projects as well as private sector investments in these and other projects have generated data and experience that provide a platform on which to build a national system. As an example, the National Farm Animal Identification and Records (FAIR) Program is an animal identification program supported by the USDA's APHIS and the Holstein Association USA, Incorporated, a non-profit breed registry organization led by dairy producers. Administered by the Holstein Association, FAIR provides the infrastructure and information system that allows for both premises of origin determination and animal tracking through two unique numbers. The first number is a premises number with a unique number assigned to each production unit for participating premises. The second number

is an animal number, which uses the American Identification Numbering (AIN) System to assign an official number for each animal. FAIR uses either a visible or an electronic identification tag to track animals from farm to market, and market to slaughter. As of February 25, 2004, almost 8,200 farms were participating in FAIR. Of this total, 1,500 farms had animals with electronic identification tags. While FAIR is a national program, over 80 percent of the farms with enrolled animals and over 90 percent farms with animals using electronic identification tags are in Michigan.

Another example is the State of Michigan, which launched an Electronic Identification (EID) Program as a pilot project in November 2001 as part of the State's bovine tuberculosis (TB) eradication plan. The program was developed and implemented through a cooperative agreement from APHIS. EID uses a tag imbedded with a radio frequency identification device (RFID) and marked with a unique, individual number that will not be duplicated. The project made tags available to producers at no charge in the Northeast Lower Peninsula or those with accredited herds. As of 2002, 432 herds, representing 17,000 individual animals, had been TB tested and tagged with RFID tags. Each RFID tag is linked to a database that includes information specific to that animal, including date of birth, sex, and type/species. EID is also tied to the FAIR Program to ensure accurate individual animal identification, tracking and coordination of TB test results and herd status.

APHIS also provided funding for the Wisconsin Livestock Identification Consortium initiative, an industry managed and controlled information system. The Consortium's program, the Animal Identification and Information System, commonly referred to as A-II, was designed in collaboration with the Wisconsin Department of Agriculture, Trade and Consumer Protection and USDA. The goals of the Wisconsin livestock identification project are to: produce a fully

operational, scalable livestock identification and information system; provide the basis for an system to cover all major livestock species; support a national system through compatible regionalized data systems in partnership with added-value service providers; demonstrate the feasibility of providing a new service integral to obtaining value from identity-preserved livestock products; provide information on how to enhance the marketing of livestock products; and serve as a model for public/private partnerships that serve both the producer's added-value programs and that of the regulatory agencies.

In addition to programs directly funded by USDA, a more comprehensive U.S. animal identification plan has been developed by an industry-state-Federal partnership including more than 100 animal industry and state and Federal government professionals representing more than 70 associations. This plan is the United States Animal Identification Plan (USAIP). While implementation details of the plan are still being worked on, the USAIP describes an information system and infrastructure to enable the identification of all animals and premises potentially exposed to an animal with a disease of concern within 48 hours. .

The USAIP identifies four key data elements that require standards: (1) a uniform premise identification system; (2) a uniform and nationally recognized individual animal identification numbering system; (3) a uniform and nationally recognized numbering system for groups or lots of animals; and (4) a uniform numbering system for non-producer participants (such as tag distributors, animal health officials, laboratories, processing plants).

Under USAIP, the information system uses identification of each premise and the recording of U.S. Animal Identification Numbers and U.S. Group/Lot Identification Numbers. USAIP then associates the animal ID data to each premises where the animals or group are located and the specific dates an animal was at a location. Species specific working groups are

currently working within the framework of the USAIP to develop animal identification implementation details for: bison, beef cattle, dairy cattle, swine, sheep, goats, camelids (alpacas and llamas), horses, cervids (deer and elk), poultry, and aquaculture. While USAIP suggests the potential use of alternative technologies to identify animals if appropriate standards are established, the focus is to foster the adoption of national standards for the use of RFID devices in animals.

Governance of USAIP is planned as a joint Federal/state responsibility with oversight and input from industry. For example, State governments would maintain a state premises database system, submit premises data to a national premises repository, maintain intrastate animal movement database, and report interstate movement to an national identification database. The USDA would allocate U.S. Animal Identification Numbers, administer the national premises repository, including the allocation of premises numbers, and administer the national animal identification database. In addition, APHIS and individual state animal health entities would ensure uniformity of operation across the United States. The USAIP notes that costs would be substantial and recommends both public/private funding to cover the cost of the program.

The United States is not alone in developing animal identification systems. Most developed countries have either already adopted or are planning to adopt some system to identify and trace the movement of livestock within their borders.

**EU experience.** The European Union (EU) has adopted the most comprehensive program of animal identification and tracking. Under EU rules, the basic objective of animal identification and tracking is to control infectious diseases. However, different identification and registration systems apply to different types of livestock. Depending on the individual needs of

the different species, those systems include several elements like identifiers, registers, or passports.

Illustrative of the EU system is the current system operating in the United Kingdom (UK) for cattle. The British Cattle Movement Service (BCMS) is the agency that is responsible for cattle tracing for Great Britain. The four elements of the cattle identification and registration system are: tagging (cattle must have a unique number); farm records (records of cattle births, imports, movements and deaths); passports (recording where cattle have been throughout their lives); and inclusion in the cattle trace scheme (CTS).

CTS records the identification and death of cattle, the movements from birth to death of cattle issued with passports (since 1998), and the movements of older cattle (since 2001). However, electronic tagging of cattle is not compulsory within the EU or UK. The Government plans to recover the costs of running the CTS from industry beginning April 2004 at the earliest.

Other animals in the UK are not part of the CTS but must be identified. For example, pigs under 1 year of age moving direct to slaughter and pigs over 1 year of age moving to any destination must be identified with a slap mark on each shoulder area of the pig. Sheep are also required to be identified and the UK's Department of Environment, Food and Rural Affairs intends to run a pilot to test the effectiveness of electronic tracing in a real time environment within the sheep industry. The pilot was set to begin in December 2003 and run through December 2004 with a report due February 2005.

**Canadian experience.** The Canadian Cattle Identification Program is an industry-led initiative to promote beef consumption through assurance of efficient traceback and containment of serious animal health and food safety problems. The program is administered by the non-governmental Canadian Cattle Identification Agency (CCIA), which is led by a Board of

Directors made up of representatives from all sectors of the cattle industry and the government. The program is regulated and enforced by the Canadian Food Inspection Agency (CFIA). In the event of a health or safety issue, the CFIA is given access by the CCIA to the record of the herd of origin.

Unlike the UK program, there is no requirement that cattle movements be identified from birth to death. Rather, under the Canadian program, a unique national identification ear tag is applied by the time an animal leaves the herd of origin. Currently there are 29 approved tag options for use in the Canadian Cattle Identification Program (including 27 bar-coded plastic dangle tags and 2 electronic button tags). However, on January 1, 2005, the CCIA is moving to electronic tags (radio frequency). The program applies to all bovine and bison animals.

Canada also implemented a Canadian Sheep Identification Program on January 1, 2004. This program is also an industry-led initiative (Canadian Sheep Federation). Under this program, producers must apply an approved national ID ear tag (bar-coded tags are not required) to all lambs born on their premises before they leave the farm, and to ensure that all ovine animals bear an approved tag before they leave the premises. Unlike the cattle program, the sheep program requires sheep producers to keep records of the movement of animals. This decision was made mainly to keep costs low for producers by not requiring bar-coded tags.

**Australian experience.** Australia has also developed a National Livestock Identification Scheme (NLIS) for identifying and tracing livestock. The NLIS uses machine-readable RFIDs. NLIS approved devices come in the form of an ear tag or rumen bolus/ear tag combination. Cattle identified with NLIS devices can be electronically read as they move through the livestock chain. At time of reading, each owner's property identification code, similar to the premises ID proposed in the US system, can be recorded and linked to the NLIS device. This transaction

information is then stored in the secure central NLIS database. While the program is voluntary, all state and territory governments, together with industry, have agreed to aim for the introduction of the NLIS by July 1, 2004. State governments underpin NLIS with legislation governing the use of NLIS devices and some states specify penalties for misuse. Australia also has developed a voluntary National Flock Identification Scheme (NFIS) for the permanent identification of sheep and lambs. NFIS relies on visually readable ear tags printed with property identification codes and do not contain a RFID. It is the aim of all state and territory governments to introduce the NFIS by July 1, 2005.

In addition to animal health, another reason Australia opted for NLIS is to facilitate access to European market. To supply to the EU, a producer must be accredited under the government's European Union Cattle Accreditation Scheme (EUCAS). Accreditation requires a series of conditions to be met relating to the eligibility of cattle, the introduction of cattle, and the use of Hormonal Growth Promotants. In addition, producers must use NLIS tags or rumen boluses and interact with the NLIS database to provide full and accurate records of the status and location of their EU accredited cattle.

**Lessons learned.** There are a number of important lessons that have been learned from the work that has been ongoing both within the United States and the rest of the world.

First, it is critically important to get support from industry as we shape an animal identification system for the United States. It is clear from experiences from across the United States and in other countries that producers recognize the need for and are willing to help in designing an appropriate animal identification system.

Second, there is no "one size fits all" technology. It is likely that some technologies will work better for some species than for others. Rather than focus on a specific technology, we

should focus on the design of the identification system. What information should be collected and when should it be collected? Once the identification system is designed, the market will determine which technologies will be the most appropriate to meet the needs of the system.

Third, both public and private funding will be required for any system to become fully operational. Databases must be maintained, programs must be monitored, and equipment must be purchased. Most countries receive support from their governments in developing and maintaining their identification systems.

### **Issues to consider in scaling to a national system**

We believe that in designing a U.S. system important factors to consider are the diversity and complexity of our animal industries and the lack of experience with animal identification for a large number of U.S. producers. This extreme diversity and complexity makes immediate scaling up of current projects that have been funded by USDA difficult if not impossible until a thorough evaluation of those projects for potential use on a national scale and for a significantly broader scope than initially tested can be conducted. While many dairy producers use individual animal identification for production management purposes, there were 95 million cattle and calves in the United State on January 1, 2004, and only 9.0 million were dairy cows. The number of cattle and calves far exceeds those in the U.S. pilot programs and identified in the foreign country ID systems that were described earlier. Although cattle production varies regionally, cattle and calves are produced in every State. Texas ranks as the nation's leading producer of cattle and calves with 14 million head on January 1, 2004. Other States ranking among the top 5 cattle and calf producing States include: Kansas (6.65 million head), Nebraska (6.25 million head), California (5.2 million head), and Oklahoma (5.1 million head). One-third of all cattle and calves on January 1, 2004, were located in the top 5 producing States.

Of the 95 million head of cattle and calves in the United States on January 1, 2004, a total of nearly 14 million head of cattle and calves were on feed in feeding operations on January 1, 2004. In 2003, nearly 38 million head of calves were born, which would determine the number of new individual cattle identification numbers, along with cattle imports, that would have to be issued each year when the program is fully implemented. Some of these animals die on farms. About 4 million head of cattle and calves were estimated to die due to disease, predators, and other causes in 2003.

Imported animals would also require identification. In 2002, 2.5 million head of cattle and calves were imported into the United States. Imports from Canada accounted for two-thirds of total imports in 2002 and the remaining one-third were imported from Mexico. The finding of BSE in a cow in Canada on May 20, 2003 resulted in a ban on imports of cattle, calves, and beef from Canada. On August 8, 2003, USDA announced conditions for resuming imports of certain beef products from Canada. Imports of cattle and calves from Canada continue to be restricted. Reflecting this restriction, U.S. imports of cattle and calves dropped to 1.5 million head during the first 11 months of 2003, with Mexico comprising about two-thirds of all imports. Our national animal identification system should be compatible with foreign systems to allow for tracking to the export country, so that their identification system could be utilized as well in an animal health emergency.

An identification system would also account for exports and the United States exported nearly 450,000 head of cattle and calves in 2001, with about two-thirds of all exports going to Canada and about one-third going to Mexico. Over the past two years, the U.S. supply of feeder cattle has tightened and exports of cattle and calves have fallen off sharply. In 2002, U.S. exports of cattle and calves dropped to 244,000 head and declined to 94,000 head through the

first 11 months of 2003. The confirmation of a BSE in Washington State on December 23, 2003 has caused importing countries to restrict the importation of cattle and calves and beef products from the United States.

The complexity of implementing an identification system is also evidenced by the existence of 1.03 million cattle and calf producers located in all 50 States in 2003, with about 0.9 million cow-calf producers. Three-fifths of U.S. cattle producers had fewer than 50 head and 99 percent had fewer than 1,000 head. Fifteen percent of all cattle and calf producers are located in Texas. Only two other States had more than 50,000 cattle and calf producers in 2003—Oklahoma and Missouri. Thirty-four States have more than 10,000 producers.

The national identification system must also accommodate the nation's 95,189 cattle feeding operations that operated in 2002. Ninety-eight percent of these feedlots have less than 1,000 head capacity and are primarily located in the Corn Belt. On average, feedlots with less than 1,000 head capacity marketed about 40 head per year. The 2,189 feedlots with capacity of 1,000 head or more accounted for over 86 percent of all cattle marketed from feedlots in the United States in 2002.

The U.S. hog industry is also interested in participating in a national system at the outset. This industry, too, presents a challenge due to its size and complexity. The U.S. had 60.0 million hogs on December 1, 2003. In 2003, 100.4 million head were born, about 7 million head were estimated to die due to disease, predators, and other causes and 100 million head of hogs were slaughtered. Hogs are produced in every State. Iowa ranks as the nation's leading producer of hogs with 15.8 million head on December 1, 2003. Other States ranking among the top 5 hog producing States include: North Carolina (9.9 million head), Minnesota (6.4 million head),

Illinois (4.0 million head), and Indiana (3.1 million head). Nearly two-thirds of all hogs on December 1, 2003 were located in the top 5 producing States.

In 2003, 7.1 million head of hogs were imported into the United States essentially all of which were imported from Canada. The United States is not a major hog exporter.

In 2002, there were 75,350 hog producers located in all 50 States. Two-fifths of these producers had fewer than 99 head and 57 percent had fewer than 500 head. In contrast, 0.1 percent (110 operations) of hog producers had 50,000 or more head. These large producers accounted for nearly 50 percent of all hogs marketed in 2002. Thirteen percent of all hog producers are located in Iowa followed by Minnesota with 8 percent and Illinois with 6 percent.

The U.S. sheep industry is another priority species for participation in a national identification system. On January 1, 2004, there were 6.1 million head of sheep and lambs on farms. The 2003 lamb crop was 4.1 million head in 2003, which was a new record low. In 2002, 3.4 million head of sheep and lambs were slaughtered in the United States. The number of sheep and lambs has trended downward since peaking at 56.2 million head in 1942. Sheep and lambs are produced in nearly every State. Texas ranks as the nation's leading sheep and lamb producer with inventory of 1.1 million head on January 1, 2004. The other top 5 States include California (0.7 million head), Wyoming (0.4 million head), South Dakota (0.4 million head), and Colorado (0.4 million head).

In 2002, there were 64,170 sheep and lamb producers. About 10 percent or 6,800 sheep and lamb producers were located in Texas in 2002 and another 4,600 producers were located in Iowa. Other States with over 3,000 sheep and lamb producers in 2002 included Ohio and Oregon.

In addition to the diversity and complexity of the U.S. livestock industries, there are many nonproducers that must participate in a national identification system. For example, there were 3,233 U.S. livestock slaughter plants in 2003, of which 879 were under Federal inspection. Most of these plants slaughter fewer than 1,000 head annually. Three-fourths of the cattle slaughter plants, nearly two thirds of the hog slaughter plants, and 85 percent of the sheep and lamb slaughter plants slaughtered fewer than 1,000 head of each species and these plants accounted for less than 1 percent of total slaughter. In contrast, the Federally inspected plants that slaughtered over 1 million head of each species accounted for over 50 percent of total cattle slaughter and 88 percent of hog slaughter in 2002.

USDA also estimates there are 7,775 posted stockyards, bonded dealers and market agencies involved in the buying, selling, and marketing of livestock in the United States, and many of these would have to report in a national identification system that kept track of animal movement. Some of these stockyards, dealers, and market agencies may deal exclusively with species other than cattle and calves.

In addition to the large numbers of animals, producers and nonproducers that must be accounted for in a national system, there is also a decided lack of experience with individual animal identification in the United States, and where it exists, the systems used are quite diverse. A large number of producers, especially cow-calf operators, do not currently individually identify their animals. Thus, a major component of implementing a national system will be educating livestock producers and processors as to how the system would operate and their responsibilities.

Under a national animal identification system, producers and processors would be responsible for registering animals and recording their movement over an animal's lifespan. It is

envisioned that each animal would be identified, and its movements would be catalogued through time. Producers, marketers and livestock processors would have to be educated on the premise and livestock numbering systems, the technologies for recording an animal's movements, and other aspects of the program. To meet the educational needs of livestock producers and processors, USDA will need to work in concert with States, organizations, and other stakeholders.

Another issue is the authority of USDA to implement a national identification system. The Animal Health Protection Act (AHPA) was enacted to enable the Secretary of Agriculture to prevent, detect, control, and eradicate diseases and pests of animals in order to protect animal health, the health and welfare of people, economic interests of livestock and related industries, the environment, and interstate and foreign commerce in animals and other articles. The AHPA gives the Secretary a broad range of authorities. The Secretary is specifically authorized to carry out operations and measures to detect, control, or eradicate any livestock pest or disease. The Secretary may also prohibit or restrict the importation, entry, or interstate movement of any animal, article, or means of conveyance to prevent the introduction into or dissemination within the United States of any livestock pest or disease. The Secretary also has authority to cooperate with other Federal agencies, States, or political subdivisions of States, national or local governments of foreign countries, domestic or international organizations or associations, Indian tribes and other persons for the purpose of detecting, controlling, preventing, or eradicating any livestock pest or disease.

A system of animal identification could facilitate the detection, prevention, control, and eradication of pests and diseases of livestock. We believe the provisions of the AHPA authorizing the Secretary to carry out operations and measures to detect, control, or eradicate

livestock pests or disease provide the Secretary with ample authority to establish and implement either a mandatory or voluntary system of animal identification. Also, the AHPA enables the Secretary to enter into agreements with States or other stakeholder organizations to implement either a mandatory or voluntary animal identification program.

A national animal identification system would provide information on animal numbers by location and the movement of those animals over their lifespan. The potential disclosure of individual producer and processing plant information gives rise to concerns about the accessibility and the confidentiality of the individual records contained in a national animal identification database. Under the Freedom of Information Act, agency records are accessible to the public. However, agency information contained in a database that would reveal confidential business information is not accessible to the public under the Freedom of Information Act. Another concern is whether Federal agencies could access information in the national animal identification database for their program purposes.

Uncertainty over the confidentiality and accessibility of information in a national animal identification database may cause some livestock producers and processors to delay participation in a national animal identification system until these issues have been resolved. Federal legislation addressing the confidentiality and accessibility of information in a national animal identification database may be needed to address the concerns of livestock producers and processors and expedite the implementation of a national animal identification system.

#### **USDA's goal for a national animal identification system**

Our goal is to create an effective, uniform, consistent, and efficient national system. We believe this goal can be achieved by adhering to several key objectives.

First, the system should allow producers, to the extent possible, the flexibility to use current systems or adopt new ones. Producers should not be burdened with multiple identification numbers, systems, or requirements.

Second, this flexibility can best be achieved by having a system that is technology neutral, so that all existing forms of effective technologies and new forms of technologies that may be developed in the future may be utilized. In this regard, we also expect successful pilot programs, particularly those USDA has funded to date, will play an important role in scaling up during the transition period to a full national program.

Third, the national identification system should use and build upon the excellent data standards developed by the USAIP. Provisions to ensure data confidentiality are an essential part of this objective.

Fourth, the system must not preclude producers from being able to use it with production management systems that respond to market incentives. We want a system that will be compatible with the alternative management programs now being used to improve animal health and quality.

Fifth, the architecture for the national identification system must be designed so that the system does not unduly increase the role and size of the government. The President's budget proposal for fiscal year 2005 requests \$33 million to fund that year's activities for system implementation. No funds have been appropriated for fiscal year 2004. Since we plan to initiate implementation during fiscal year 2004, we are considering alternative methods of funding.

#### **Phased implementation plan for a U.S. system**

USDA plans to move forward with implementation of a national animal identification system in 2004, first on a voluntary basis, and eventually with a requirement for premises and

individual identification for all animals. Although we are still developing our specific timeline for implementation and deciding on a funding mechanism, we can provide some preliminary and general indications of activities for 2004. Our implementation would begin with an assessment this winter and spring of the existing premises and animal number allocation systems now in use. This review would identify, validate and verify the capabilities of current systems in operation and determine the capacity of any of these systems to serve as a national premises and animal number allocator and repository. Based on that review, we would select the most promising infrastructure to fund to develop the national premises allocation number and repository system and an animal identification allocation number and repository system.

Our first priority is to get the national premises allocator and repository in place in fiscal year 2004 and begin allocating premise identification numbers to cooperating states, tribes and certain other entities that are ready to register premises. We would envision providing some funding through cooperative agreements to states, tribes and the other entities so that they could develop the capacity to interface with the national number allocators and repositories. Once cooperators have integrated with the national systems and premises are being registered, we would be in position to issue animal identification numbers to producers through these early cooperators.

The technologies used by producers and nonproducers to identify and track movements of animals would be worked out through the cooperative agreements with the input of states, animal health officials, producers, and industry; USDA plans to be technology neutral. Our interests are in setting information standards, developing a database system to which states and other entities can readily connect, and receiving data from these entities. At this point, we do not envision any significant Federal funding being used for individual animal tags or other such

devices, however, funding of select electronic readers could be accommodated under the agreements with some cooperators. We envision third party premises allocation would be coordinated with the state animal health official for the state in which the premises is being allocated.

Starting in fiscal year 2004, we would also focus on identifying and qualifying third parties, such as private industry and trade associations, that have identification products or programs, so they could be integrated into the national system. In early fiscal year 2005, we would then be in a position to issue premise and animal identification numbers to third parties and to begin receiving information from third parties into the system.

Many issues must be resolved before we can accomplish the tasks just identified for 2004 and beyond. We look forward to working with the nation's producers, industry, animal health officials, state governments, the USAIP Steering Committee and the Congress to successfully achieve a national animal identification system.

Thank you and we would be pleased to respond to any questions you may have.